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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/521,818

01/21/2005

Koji Yamada

12065-0020

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22902

7590

12/22/2008

CLARK & BRODY

1090 VERMONT AVENUE, NW

SUITE 250

WASHINGTON, DC 20005

EXAMINER

YANG, JIE

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/521,818	<b>Applicant(s)</b> YAMADA ET AL.	
	<b>Examiner</b> JIE YANG	<b>Art Unit</b> 1793	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1, 3 and 4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3, and 4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/3/2008 has been entered.

### ***Status of the Claims***

Claim 1 has been amended and claims 1, 3, and 4 are pending in application.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ezawa et al (US 5,252,305, thereafter, US'305) in view of Yamada (JP 2000-248322,

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thereafter, JP'322) and further in view of Jones et al (US 6,699,302 B1, Thereafter, US'302).

US'305 in view of JP'322 and US'302 is applied to the claims 1 and 4 for the same reason as stated in the previous office actions dated 11/28/2007 and 6/5/2008.

Regarding the newly added limitation in the instant claim 1, US'305 teaches: "...a process of recovering a platinum group metal from a waste catalyst having, for example, a honeycomb shaped or pelletized support formed by cordierite, alumina or the like containing the platinum group metal for purifying a waste gas of an automobile (hereinafter referred to as "SAC")." (Col.1, lines 6-12 of US'305), which reads on the limitation of: a platinum group element-containing substance including spent petrochemical type catalyst or spent vehicle exhaust gas purification catalyst as recited in the instant claim 1.

Regarding ascertaining step in the instant claim 1, as pointed out in the previous office actions marked 11/28/2007 and 6/5/2008, JP'322 teaches the relationship between copper content of the molten slag and the recovery rate of Pt (table 1-2 of JP'322) and US'302 teaches the analyses of the original concentrate, roasted concentrate, and slag (Col.18, line 31 to Col.20, line 53 of US'302). US'302 teaches the similar PGMs

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recovering process using the similar electric furnace (Col.13, line 54 to Col.20, line 53 of US'302) as recited in the instant invention. Therefore, it would have been obvious to one skilled in the art to apply the slag analysis and monitoring process of US'302 in the process of US'305 in view of JP'322, because US'302 teaches high recovery of the precious metals (99.0%) could be obtained (Col.19, line 28 to Col.20, line 53 of US'302).

Regarding the limitation of discharging the molten slag with Cu 3.0wt% or less in the discharging step of the instant claim 1, the copper content in the molten slag is a result-effective variable in term of platinum group metal recovery rate as evidenced by JP'322. This point is further evidenced by US'302. US'302 teaches the Cu in slag is 5.55g in 1517g slag (0.36 wt%) in order to obtain a recovery of 99.0% PGMs (col.20, lines 24-53 of US'302). US'302 further teaches copper-nickel alloy containing the vast majority of the precious metals (Col.20, lines 24-35 of US'302). Therefore, it would have been obvious to one skilled in the art to have optimized the Cu in slag in order to obtain a desired recovery for the precious metals.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over US'305 in view of JP'322 and US'302 as applied on claims 1 and 4, and further in view of Yokoyama et al (US 5,735,933, thereafter US'933).

Claim 3 is dependent on claim 1, US'305 in view of JP'322 and US'302 teaches limitation of claim 1 as discussed above. US'933 is further applied to the claim 3 for the same reason as stated in the previous office actions dated 11/28/2007 and 6/5/2008.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1, 3 and 4 have been considered but are moot in view of the new ground(s) of rejection.

Regarding the Applicant's arguments filed on 9/3/2008 with respect to claims 1, 3, and 4, which are related to the amended features in the instant claims. The Examiner's position regarding the amended feature is stated as above. The response for the Applicants' arguments can also refer to the previous advisory action marked 9/24/2008.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jie Yang whose telephone number is 571-2701884. The examiner can normally be reached on IFP.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-2721244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JY

/Roy King/  
Supervisory Patent Examiner, Art Unit 1793